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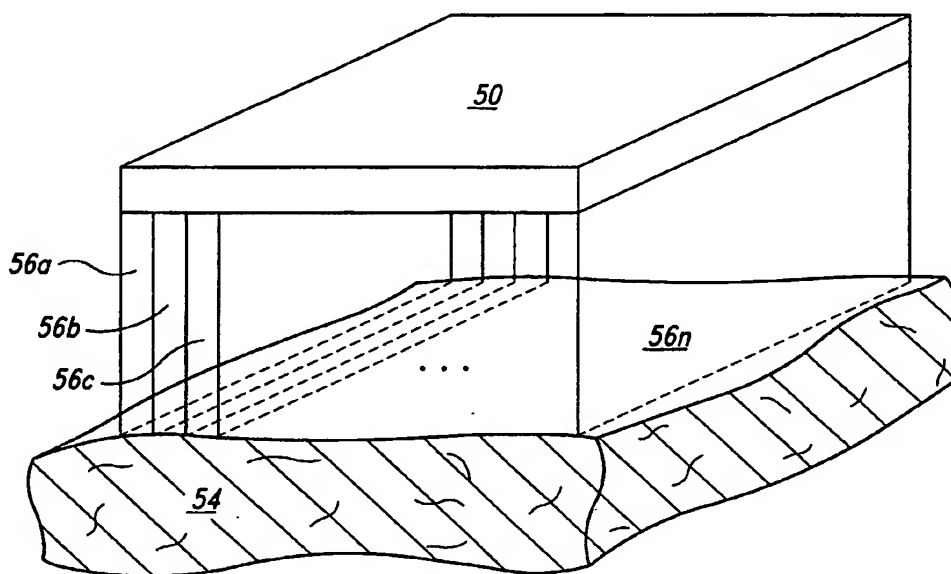
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(54) Title: SYSTEM AND METHOD FOR ULTRASOUND PERFUSION IMAGING



(57) Abstract: An ultrasound imaging system transmits a broad beam of ultrasound into tissues that are perfused with blood containing microbubbles. The ultrasound has an intensity that is sufficient to destroy the microbubbles in the tissues. A plurality of ultrasound imaging beams are then transmitted into the tissues over a sufficient period to allow the tissues to re-perfuse, and reflections from the transmitted imaging beams are processed to provide a perfusion image. The transmitted microbubble-destroying ultrasound may be in the form of a single beam or a plurality of beams that insonify a substantially larger area than the area insonified by the transmitted imaging beams. As a result, the microbubbles are all destroyed at substantially the same time, and the imaging ultrasound is transmitted only into regions of the tissues from which ultrasound reflections will be received.

**Declaration under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ,

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